ABSTRACT

For estimating a value of a vector of variables **p** in a mathematical model representing a physical process, where a state vector **x** of the model is estimated by a State Augmented Extended Kalman Filter (SAEKF), and where that the vector of variables **p** represents one or more properties of the process and is representable by a function of the state vector **x**,

the following steps are executed:

a) measuring values for measured variables **u**,

b) incorporating the vector of variables **p** as an augmented state in the SAEKF, and

c) computing an estimate of the complete state including the augmented state according to a SAEKF algorithm.

That is, process properties *themselves* are estimated, and not polynomial coefficients for computing the variables from the state, as is usually done in the SAEKF.

(figure 2)